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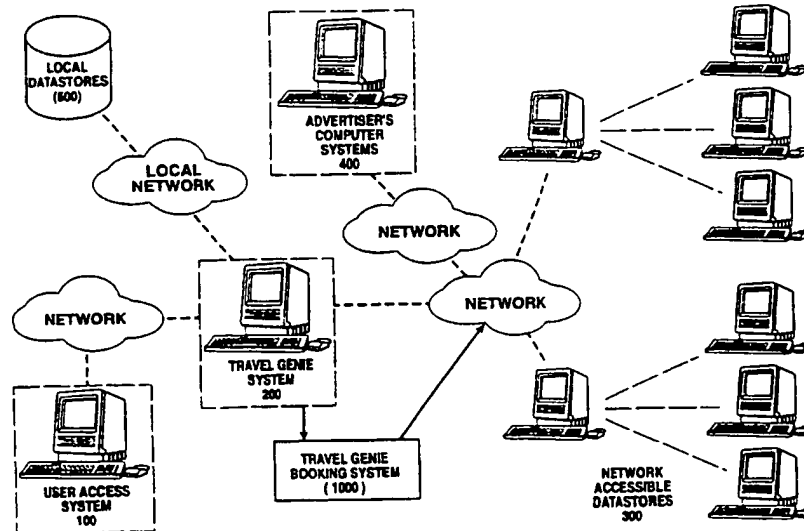
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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : <b>G06F 17/30, 17/60</b>		<b>A3</b>	(11) International Publication Number: <b>WO 98/35469</b>
			(43) International Publication Date: 13 August 1998 (13.08.98)
(21) International Application Number: <b>PCT/US98/01341</b>		<b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 23 January 1998 (23.01.98)			
(30) Priority Data: 08/788,899 23 January 1997 (23.01.97) US			
(71) Applicant: <b>THE SABRE GROUP, INC. [US/US]; 4255 Amon Carter Boulevard, Fort Worth, TX 76155 (US).</b>			
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(74) Agents: <b>GARRETT, Arthur, S. et al.; Finnegan, Henderson, Farabow, Garrett &amp; Dunner, L.L.P., 1300 I Street, N.W., Washington, DC 20005-3315 (US).</b>		<b>Published</b> <i>With international search report.</i> <b>(88) Date of publication of the international search report:</b> 29 October 1998 (29.10.98)	

## (54) Title: INFORMATION AGGREGATION AND SYNTHESIZATION SYSTEM



## (57) Abstract

An information aggregation and synthesization system and process (1000). The present invention provides aggregation and packaging of structured or unstructured information from disparate sources such as those available on a network such as the Internet. A network compatible/addressable interface device is operated by a user (100). The network interface device (100) communicates with local (500) or network accessible datastores (300) via an addressing scheme such as Uniform Resource Locator addresses (URLs) utilized by the Internet. Data passing between the network interface device (100) and the datastores (300, 500) is accessed, polled and retrieved through an intermediary gateway system (200). Such aggregated information is then synthesized, customized, personalized and localized to meet the information resource requests specified by the user via the network interface device (100).

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/01341

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>																										
IPC(6) : G06F 17/30, 17/60																										
US CL : Please See Extra Sheet.																										
According to International Patent Classification (IPC) or to both national classification and IPC																										
<b>B. FIELDS SEARCHED</b>																										
Minimum documentation searched (classification system followed by classification symbols)																										
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APS, IEEE/IEE Online Publications																										
search terms: Internet, WWW, world wide web, gateway, coupon, ad, advertis?, profile, implicit information																										
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>																										
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																								
X, P	US 5,623,652 A (VORA et al.) 22 April 1997, abstract, col. 5, lines 18-52	1-7																								
X, P ---- Y, P	US 5,710,886 A (CHRISTENSEN et al) 20 January 1998, abstract, col. 8, line 42 through col. 9, line 44	8-11 ----- 12-23																								
Y	LITTLE, Thomas D.C., Commerce on the Internet, Multimedia at Work, 1994, pages 74-78	12-23																								
Y	AUBREY, David, Nomads of the Net (intelligent agents for data searching), Computer Shopper, v 15 n 12, p 616(4) December 1995, pages 1-8	12-18																								
T	US 5,740,549 A (REILLY et al.) 14 April 1998, abstract, col. 5	1-3																								
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.																										
<table border="0"> <tr> <td>* Special categories of cited documents:</td> <td>*T</td> <td>later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>*A</td> <td>document defining the general state of the art which is not considered to be of particular relevance</td> <td></td> </tr> <tr> <td>*E</td> <td>earlier document published on or after the international filing date</td> <td>*X</td> </tr> <tr> <td>*L</td> <td>document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>*O</td> <td>document referring to an oral disclosure, use, exhibition or other means</td> <td>*Y</td> </tr> <tr> <td>*P</td> <td>document published prior to the international filing date but later than the priority date claimed</td> <td>document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td></td> <td></td> <td>*R</td> </tr> <tr> <td></td> <td></td> <td>document member of the same patent family</td> </tr> </table>			* Special categories of cited documents:	*T	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	*A	document defining the general state of the art which is not considered to be of particular relevance		*E	earlier document published on or after the international filing date	*X	*L	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	*O	document referring to an oral disclosure, use, exhibition or other means	*Y	*P	document published prior to the international filing date but later than the priority date claimed	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art			*R			document member of the same patent family
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Date of the actual completion of the international search		Date of mailing of the international search report																								
16 JUNE 1998		20 AUG 1998																								
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230		Authorized officer PARSHOTAM LALL <i>Jon</i> <i>Bill</i> Telephone No. (703) 305-9715																								

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/01341

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 5,649,186 A (FERGUSON) 15 July 1997, abstract, col. 3	1-23
A	US 5,530,852 A (MESKE, JR. et al.) 25 June 1996, abstract	1-23
A	YUWONO et al., Search and Ranking Algorithms for Locating Resources on the World Wide Web, IEEE, 1996, pages 164-171	1-23

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/01341

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Extra Sheet.

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☒ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/01341

## A. CLASSIFICATION OF SUBJECT MATTER:

US CL :

705/14, 705/26; 707/10, 501; 395/200.36, 395/200.47 395/200.48, 395/200.49

## B. FIELDS SEARCHED

Minimum documentation searched

Classification System: U.S.

705/14, 705/26; 707/10; 395/200.47 395/200.48, 395/200.49

## BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING

This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I, claim(s) 1-7, drawn to accessing, retrieving, and processing data passing between a network communication device and databases through an intermediary gateway.

Group II, claim(s) 8-23, drawn to using software agents to develop implicit and explicit user information profiles to distribute electronic coupons.

The inventions listed as Groups I and II do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Invention I has separate utility as a process for accessing, retrieving and processing data through an intermediary gateway without the software agents of invention II; and

Invention II has separate utility as a process for using software agents to generate user profiles from implicit and explicit information without the intermediary gateway of invention I.